



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,941	10/06/2003	Anuj Gupta	852463.404	3600
500	7590	04/15/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC			LE, THONG QUOC	
701 FIFTH AVE			ART UNIT	
SUITE 6300			PAPER NUMBER	
SEATTLE, WA 98104-7092			2827	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

<b>Office Action Summary</b>	<b>Application No.</b> 10/679,941	<b>Applicant(s)</b> GUPTA ET AL.	
	<b>Examiner</b> Thong Q. Le	<b>Art Unit</b> 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-20 and 28 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,9,12-15,17,21-23,26 and 27 is/are rejected.
- 7) ☒ Claim(s) 2,5-7,10-11,16,24-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

### **DETAILED ACTION**

1. Amendment filed on 02/10/2005 has been entered.
2. Claims 1-28 are presented for examination.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,3-4,8-9,12-15,17,21-23,26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by McClure (U.S. Patent No. 5,619,466).

Regarding claims 1, 9, 13-15, 26-27, McClure discloses a sense amplifier (Figure 7, 290) for a memory array providing increased reliability in sensing small voltage differences, comprising:

two cross coupled inverters (Figure 7, 290) forming a latch;

supply coupling means (Column 15, lines 5-10) for selectively connecting the latch to a supply source (296, 298);

and bit line coupling means (Figure 2, BLC, BLT) for selectively connecting inputs of each inverter to complimentary bit lines from the memory array (Column 15, lines 1-4); and

delaying means (Figure 7, inverter outputting is /SAEN) for delaying the disconnection of the bit lines from the sense amplifier after the latch has been coupled to a supply source (Column 15, lines 24-67, Column 16, lines 1-57).

Regarding claims 3-4,8-9,17,McClure discloses wherein the supply coupling means comprises an NMOS transistor (Figure 7, 300), and wherein the bit line coupling means comprise a PMOS transistor connected in series between each complimentary bit line and the latch ((ABSTRACT, Figure 6, BLT, BLC), and the delaying means comprises a plurality of inverters (Figure 7).

Regarding method claims 9,12,21-23, the apparatus discussed above would perform the method in theses claims.

#### ***Allowable Subject Matter***

6. Claims 2, 5-7, 10-11,16,24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 5-7, 10-11,16,24-25 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. McClure (U.S. Patent No. 5,619,466), and others, does

not teach the claimed invention having a compensating means comprises a pair of NMOS transistors connected between the latch and the common supply terminal.

7. Claims 18-20,28 are allowed.

Claims 2, 5-7, 10-11,16,24-25 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. McClure (U.S. Patent No. 5,619,466), and others, does not teach the claimed invention having a third and fourth PMOS transistors have a terminal configured to coupled to a bit line of memory array and the other terminal coupled to the second node and a control gate coupled to a delayed sense amplifier enable signal source.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2827

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le  
Primary Examiner  
Art Unit 2827

**THONG LE**  
**PRIMARY EXAMINER**